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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,196	12/18/2001	Antonius Hendricus Maria Holtslag	NL000736	3300

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EXAMINER

LEWIS, DAVID LEE

ART UNIT PAPER NUMBER

2673

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/023,196

Applicant(s)

HOLTSLAG ET AL.

Examiner

David L. Lewis

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7, 14 and 15 is/are rejected.  
7) ☐ Claim(s) 8-13 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**1. Claims 1-7, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kasahara et al. (200210036650 A1).**

**As in claim 1, Kasahara et al. teaches of a matrix display device, figure 9, paragraph 2 and 104,**

**comprising a plurality of light emitting elements, figure 9 item 24, paragraph 2 and 119,**

**drive means, arranged for sub-field addressing of the light emitting elements, figure 9 items 20, 22, paragraph 118 and 119,**

**determining means, for determining a display load of the device and for comparing the display load of the device with a threshold value, figure 9 item 30, paragraph 114,**

**and control means, for dynamically reducing a number of sub-fields available for display of an image responsive to said determined display load being below the threshold value, figure 9 item 34, paragraphs 118 and 121.**

As shown in figure 9 of Kasahara et al., they teach of a display apparatus capable of adjusting the subfield number in accordance with brightness, which is equivalent to adjusting the subfield number in accordance with load. The load is determined by determining means figure 9 item 30 which also uses a previously stored map to specify the subfield parameter Z. The subfield number Z is adjusted in accordance with load/brightness as compared by the map. The brightness or load has a corresponding threshold value which determines the appropriate subfield number to achieve proper balance. An image characteristic determining device figure 9 item 30 receives the average Lav and peak level Lpk, and decides the subfield number Z based on the previously stored map. The threshold value corresponds to the measured Lav and Lpk, wherein a specific Lav and Lpk value corresponds to a specific subfield number Z.

**As in claim 2, Kasahara et al. teaches of wherein the drive means comprises a subfield converter, figure 9 item 18, paragraph 118,**

**and a matrix display drive means, coupled to the subfield converter, figure 9 items 20 and 22, paragraph 119;**

**both the subfield converter and the determining means are receiving an incoming video signal, figure 9 item 2, paragraph 104;**

**the determining means comprises means for providing information about the display load to the control means, figure 9 item 30 and 34, paragraph 118;**

**the control means is coupled to the subfield converter for dynamically varying the number of subfields available to display the image, figure 9 item 34 to 18, paragraph 118;**

**and the matrix display drive means are coupled to the light emitting elements, figure 9 items 20, 22, and 24, paragraph 119.**

**As in claim 3**, Kasahara et al. teaches of a comprising means for applying partial line doubling and being coupled to the control means to receive information related to the display load and coupled to the matrix display drive means, to apply partial line doubling responsive to said display load being determined to be below a threshold value, figure 9 item 18, paragraph 118.

**As in claim 4**, Kasahara et al. teaches of comprising means for applying dithering and being coupled to the control means to receive information related to the display load and coupled to the matrix display drive means for applying dithering, responsive to said display load being determined to be below a threshold value, figure 9 item 18, figure 20 item 18, paragraph 118.

**As in claim 5**, Kasahara et al. teaches of and including means for applying partial line doubling responsive to the said display load being determined to be below a threshold value, figure 9 item 18, figure 20 item 18, paragraph 118.

**As in claim 6**, Kasahara et al. teaches of a; and including means for applying dithering, responsive to the said display load being determined to be below a threshold value, figure 9 item 18, figure 20 item 18, paragraph 118.

**As in claim 7**, Kasahara et al. teaches of a, and determining means comprising processor means for continuously monitoring the display load, figure 9 item 30, paragraph 121.

**As in claim 15**, Kasahara et al. teaches of a display apparatus arranged for receiving a video signal and for processing the signal so as to display an image determined by the signal, the image determining a display load within the apparatus, and the apparatus having means for receiving a power supply having regard to the display load, figure 9 item 54, paragraph 54.

**As in claim 14, Kasahara et al. teaches** of a method of controlling light output from a matrix display device employing sub-field addressing and comprising determining the display load of the device, comparing the display load of the device with a threshold value, **figure 9 item 30, paragraph 114,**

and dynamically reducing the number of subfields available for display of an image responsive to said display load being determined to be below the threshold value, **figure 9 item 34, paragraphs 118 and 121.**

As shown in figure 9 of Kasahara et al., they teach of a display apparatus capable of adjusting the subfield number in accordance with brightness, which is equivalent to adjusting the subfield number in accordance with load. The load is determined by determining means figure 9 item 30 which also uses a previously stored map to specify the subfield parameter Z. The subfield number Z is adjusted in accordance with load/brightness as compared by the map. The brightness or load has a corresponding threshold value which determines the appropriate subfield number to achieve proper balance. An image characteristic determining device figure 9 item 30 receives the average Lav and peak level Lpk, and decides the subfield number Z based on the previously stored map. The threshold value corresponds to the measured Lav and Lpk, wherein a specific Lav and Lpk value corresponds to a specific subfield number Z.

**2. Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Correa et al. (6674429).**

**As in claim 1, Correa et al. teaches** of a matrix display device, **figure 4, column 1 lines 14-23,**

comprising a plurality of light emitting elements, **figure 6 item 16, column 3 lines 54-62, column 8 lines 35-45,**

drive means, arranged for sub-field addressing of the light emitting elements, **figure 4 items 16, column 8 lines 37-43,**

determining means, for determining a display load of the device and for comparing the display load of the device with a threshold value, **figure 4 items 10 and 11, column 7 lines 45-67, column 8 lines 7-24,**

and control means, for dynamically reducing a number of sub-fields available for display of an image responsive to said determined display load being below the threshold value, **figure 4 item 11, column 5 lines 25-53, column 7 lines 38-44, column 8 lines 7-45.**

Wherein Correa teaches of dynamic subfield control based on the average power measured from the RGB data, said average power being representative of the load. This power value is given to the control means 11 which dynamically adjusts the number of subfields based the specific value of the power.

**As in claim 14, Correa et al. teaches** of a method of controlling light output from a matrix display device employing sub-field addressing and comprising determining the display load of the device, **figure 4, column 8 lines 7-24.**

comparing the display load of the device with a threshold value, **figure 4 items 10 and 11, column 7 lines 45-67,**

and dynamically reducing the number of subfields available for display of an image responsive to said display load being determined to be below the threshold value, **figure 4 item 11, column 5 lines 25-53, column 7 lines 38-44, column 8 lines 7-45.**

***Allowable Subject Matter***

3. Claims 8-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's arguments filed 1/4/2006 have been considered but are not persuasive. Applicant argues Kasahara fails to teach of a threshold value. The threshold value corresponds to the measured Lav, the average brightness level. Applicant argues neither element 30 nor element 18 receive the incoming video signal 2. The signal 2 is the reason the display functions to display information. Signal 2 flows through items 8, 10, 11, 12, 14, 16, 18, 20, and 24. Applicant argues nothing in Kasahara suggests partial line doubling or dithering. Kasahara suggests partial line doubling or dithering in paragraph 51 and in figure 20. Applicant argues Kasahara fails to compare the display load of the device with a threshold value and dynamically vary the number of sub-fields. As mentioned above, the threshold value corresponds to the measured Lav, the average brightness level, which is a direct reflection of display load. Its value determines when to dynamically vary the number of sub-fields. Applicant argues Kasahara fails to teach of said control means of claim 8-13. Said arguments are persuasive.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(571) 272-7673**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts




to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on **(571) 272-7681**. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571)-273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner: David L. Lewis

March 12, 2006

  
**BIPIN SHALWALA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**